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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,461	01/05/2006	Warren Smook	9031-1017	1343

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EXAMINER

LEWIS, TISHA D

ART UNIT	PAPER NUMBER
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3681

MAIL DATE	DELIVERY MODE
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09/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,461

Applicant(s)

SMOOK ET AL

Examiner

TISHA D. LEWIS

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

The following is a first action on the merits of application serial no. 10/563,461 filed on January 5, 2006.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement filed on January 5, 2006 has been considered.

Specification

The disclosure is objected to because of the following informalities:

-Headings are needed to introduce different parts of the specification (i.e., Background of the Invention, Summary of the Invention, etc).

-A brief description is needed in the specification for Figure 5 to Figure 10.

Appropriate correction is required.

Claim Objections

Claims 5, 12 and 13 are objected to because of the following informalities:

-In claim 5, line 1, after "according", -to- should be inserted.

-In claim 12, line 4, "is" and "torsionally" should be separated.

-In claim 13, line 4, "the" and "flexpin" should be separated. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 1 and 13, the addition of the word "type" to an otherwise definite expression extends the scope of the expression so as to render it indefinite, MPEP 2173.05(b)E.

Claim 11 recites the limitation "the main bearing" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-12, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/079644. As to claim 1, WO discloses a sun (14), planet (17) and ring gears (7) and a planet carrier (5), the carrier has a bogie plate (21) which supports and locates circumferentially spaced planet gear bearings (25) on which the planet gears are mounted and at least some of the bearings are taper roller bearings (seems to be inclined rollers in figures shown).

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As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (17a, 17b are at least two sets).

As to claim 3, WO discloses the bearings (25) supporting the pairs of aligned planet gears.

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (17a and 17b are on opposite sides of plate 21).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (Figure 3, 25 has separate bearings for 17a and 17b).

As to claim 7, WO discloses the bearings being supported by a shaft (19) which self adjust in an angular position relative to the plate.

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (not referenced) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate.

As to claims 10, 15 and 16, WO discloses the bogie plate (21) being able to deform elastically (slightly resilient) to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear.

As to claim 11, WO discloses a main bearing (27) having an inner ring bearing surface (27b) of a diameter greater than that of a toothed surface of the ring gear.

As to claim 12, WO discloses the carrier (5) having a radially extending torque path which is torsionally stiff (due to bolting to hub) but relatively compliant in an axial direction parallel with the axis about which the forces act.

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Claims 1-14, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 02/14690. As to claim 1, WO discloses (Figure 4) a sun, planet and ring and a planet carrier, the carrier has a bogie plate which supports and locates circumferentially spaced planet gear bearings on which the planet gears are mounted and at least some of the bearings are taper roller bearings (well known in art to use taper bearings as disclosed in the prior art for use of the main bearing) .

As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (Figure 4).

As to claim 3, WO discloses the bearings supporting the pairs of aligned planet gears (Figure 4).

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (Figure 4).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (Figure 4).

As to claim 6, WO discloses the tapered roller bearings arranged in an O configuration (claim 21).

As to claims 7 and 13, WO discloses the bearings being supported by a shaft (26 flexpin shaft) which self adjust in an angular position relative to the plate.

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (not referenced) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate.

As to claims 10, 15 and 16, WO discloses the bogie plate being able to deform elastically to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear.

As to claim 11, WO discloses a main bearing having an inner ring bearing of a diameter greater than that of a toothed surface of the ring gear (claim 3).

As to claim 12, WO discloses the carrier having a radially extending torque path which is torsionally stiff but relatively compliant in an axial direction parallel with the axis about which the forces act (claim 6).

Claims 1-14, 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 03/014566. As to claim 1, WO discloses (claims 1 and 19) a sun, planet and ring and a planet carrier, the carrier has a bogie plate which supports and locates circumferentially spaced planet gear bearings on which the planet gears are mounted and at least some of the bearings are taper roller bearings (well known in art to use taper bearings as disclosed in the prior art for use of the main bearing) .

As to claim 2, WO discloses the planet gears arranged in axially aligned pairs (claim 2).

As to claim 3, WO discloses the bearings supporting the pairs of aligned planet gears (claim 2).

As to claim 4, WO discloses two pairs of each set positioned on opposite sides of the plate (claim 3).

As to claim 5, WO discloses the planet gears being each mounted on a pair of tapered roller bearings (claim 19).

As to claim 6, WO discloses the tapered roller bearings arranged in an O configuration (claim 19).

As to claims 7 and 13, WO discloses the bearings being supported by a shaft (26 flexpin shaft) which self adjust in an angular position relative to the plate (claim 4).

As to claim 8, WO discloses the bearings for some of the planets being supported on a shaft (Figure 4) rigidly secured to the bogie plate.

As to claim 9, WO discloses each shaft rigidly secured to the plate (Figure 4).

As to claims 10, 15 and 16, WO discloses the bogie plate being able to deform elastically to allow self adjustment of the angular position of each shaft relative to the axis of rotation of the ring gear (claims 1 and 4).

As to claim 11, WO discloses a main bearing having an inner ring bearing of a diameter greater than that of a toothed surface of the ring gear (claim 10).

As to claim 12, WO discloses the carrier having a radially extending torque path which is torsionally stiff but relatively compliant in an axial direction parallel with the axis about which the forces act (claim 13).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/079644 in view of WO/02/14690 and WO 03/014566. WO 02/079644 disclose taper

roller bearings, but does not disclose the configuration in which the bearings are disposed.

Both WO in view of references disclose having roller bearings disposed in an O configuration.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the bearing configuration of WO 02/079644 in view of both WO references to minimize overhung loads on the planet components.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/079644 in view of WO/02/14690 and WO 03/014566. WO 02/079644 disclose the planet gears supported to the bogie plate by a shaft, but does not disclose the shaft being of a flexpin.

Both WO references disclose a shaft (26) being of a flexpin operation due to flexing of component (33).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the shaft (19) of WO 02/079644 in view of both WO references to isolate axial forces from the planet gears during operation.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

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1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7, 10-12, 15 and 16 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4, 10, 13 and 19 of U.S. Patent No. 7,090,465. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the present application are encompassed in the claims of the patent. Claims 1-7 of the present application are patented in the claims of 1, 2, 3 and 19 of the patent and claims 7, 10, 11, 12, 15 and 16 are of the present application are patented in the claims 1, 4, 10 and 13 of the patent.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Flamang et al 7,011,598.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-F 7:30 AM TO 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tdl
September 1, 2007


TISHA LEWIS
PRIMARY EXAMINER
AR 3681 9/1/07